

Guidelines for Estimating Organic Crop Production Costs 2018

in Manitoba



Guidelines For Estimating Organic Crop Production Costs - 2018

Date: January, 2018

The following budgets are estimates of the cost of producing the most commonly grown organic field crops in Manitoba. General Manitoba Agriculture recommendations are assumed for crop fertility management. These figures provide an economic evaluation of the crops and estimated yields required to cover all costs. Costs include labour, investment and depreciation, but do not include management costs, nor do they necessarily represent the average cost of organic production in Manitoba.

These budgets may be adjusted by putting in your own figures. As a producer you are encouraged to calculate your own costs of production for various crops. On each farm, costs and yields differ due to soil type, climate and agronomic practices.

This tool is available as an Excel worksheet at: www.manitoba.ca/agriculture or at your local [Manitoba Agriculture office](#).

[The Farm Machinery Custom and Rental Rate Guide](#) is also available to help determine machinery costs.

Additional information and resources on organic crop production in Manitoba is available at: [Organic Crops](#)

Note: This budget is only a guide and is not intended as an in-depth study of the cost of production of this industry. Interpretation and use of this information is the responsibility of the user. If you need help with a budget, contact your local Manitoba Agriculture Office.

Organic Crop Production Costs 2018 Guidelines (Dollars Per Acre)

	Brown Flax	Green Peas	HRS Wheat	Oats	Hemp Oil	Soy- beans	Feed Barley	Fall Rye
A. Operating Costs								
Seed & Treatment	\$48.21	\$50.00	\$48.60	\$39.00	\$62.50	\$75.60	\$27.50	\$24.00
Fertility	\$89.77	\$89.77	\$89.77	\$89.77	\$89.77	\$89.77	\$89.77	\$89.77
Compost	\$12.23	\$12.23	\$12.23	\$12.23	\$12.23	\$12.23	\$12.23	\$12.23
Herbicide	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fungicide	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Insecticide	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fuel	\$17.51	\$17.55	\$17.70	\$18.14	\$17.47	\$17.50	\$17.77	\$17.62
Machinery Operating	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Machinery Lease	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Rental and Custom	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Crop Insurance	\$21.12	\$12.20	\$18.31	\$13.99	\$30.67	\$17.87	\$6.15	\$10.16
Hail Insurance	\$5.12	\$10.24	\$5.12	\$5.12	\$10.24	\$7.68	\$5.12	\$5.12
Other Costs	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75
Certification Cost	\$3.33	\$3.33	\$3.33	\$3.33	\$3.33	\$3.33	\$3.33	\$3.33
Land Taxes	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Drying Costs					\$20.00			
Interest on Operating	\$5.75	\$5.70	\$5.70	\$5.36	\$6.97	\$6.42	\$4.87	\$4.87
Total Operating	\$235.79	\$233.77	\$233.51	\$219.69	\$285.93	\$263.15	\$199.48	\$199.85
B. Fixed Costs								
Land Investment Costs	\$64.68	\$64.68	\$64.68	\$64.68	\$64.68	\$64.68	\$64.68	\$64.68
Machinery Depreciation	\$43.29	\$43.29	\$43.29	\$43.29	\$43.29	\$43.29	\$43.29	\$43.29
Machinery Investment	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91
Storage Costs	\$2.17	\$2.80	\$4.89	\$11.18	\$1.65	\$2.10	\$5.87	\$3.77
Total Fixed	\$122.04	\$122.67	\$124.77	\$131.06	\$121.53	\$121.97	\$125.75	\$123.65
Total Operating & Fixed	\$357.83	\$356.44	\$358.28	\$350.75	\$407.46	\$385.12	\$325.23	\$323.50
C. Labour								
	\$64.00	\$64.00	\$64.00	\$64.00	\$64.00	\$64.00	\$64.00	\$64.00
Total Costs	\$421.83	\$420.44	\$422.28	\$414.75	\$471.46	\$449.12	\$389.23	\$387.50

Profitability Analysis

Estimated Farmgate								
Target Price \$ per unit	\$36.00	\$17.00	\$18.00	\$5.75	\$1.40	\$27.00	\$7.00	\$8.00
Target Yield per acre	15.5	20.0	35.0	80.0	520	15.0	42.0	27.0
Unit type	bu	bu	bu	bu	lb	bu	bu	bu
Gross Revenue / acre	\$558.00	\$340.00	\$630.00	\$460.00	\$728.00	\$405.00	\$294.00	\$216.00
Revenue Ranking	4	8	3	5	1	7	9	11
Operating Expense Ratio	42.3%	68.8%	37.1%	47.8%	39.3%	65.0%	67.9%	92.5%
Marginal Returns								
Over Operating Costs	\$322.21	\$106.23	\$396.49	\$240.31	\$442.07	\$141.85	\$94.52	\$16.15
Over Operating & Fixed Costs	\$200.17	(\$16.44)	\$271.72	\$109.25	\$320.54	\$19.88	(\$31.23)	(\$107.50)
Over Total Costs (Net Profit)	\$136.17	(\$80.44)	\$207.72	\$45.25	\$256.54	(\$44.12)	(\$95.23)	(\$171.50)
Profitability Ranking	4	8	3	6	2	7	9	11
Return on Investment (ROI)	32.28%	(19.13%)	49.19%	10.91%	54.41%	(9.82%)	(24.47%)	(44.26%)
Return on Asset (ROA)	7.97%	1.29%	10.26%	5.43%	11.67%	2.39%	0.92%	(1.50%)

Breakeven Analysis

Breakeven Price Per Unit								
Over Operating Costs	\$15.21	\$11.69	\$6.67	\$2.75	\$0.55	\$17.54	\$4.75	\$7.40
Over Operating & Fixed Costs	\$23.09	\$17.82	\$10.24	\$4.38	\$0.78	\$25.67	\$7.74	\$11.98
Over Total Costs	\$27.21	\$21.02	\$12.07	\$5.18	\$0.91	\$29.94	\$9.27	\$14.35
Breakeven Yield (Bu or lb.)								
Over Operating Costs	6.5	13.8	13.0	38.2	204.2	9.7	28.5	25.0
Over Operating & Fixed Costs	9.9	21.0	19.9	61.0	291.0	14.3	46.5	40.4
Over Total Costs	11.7	24.7	23.5	72.1	336.8	16.6	55.6	48.4
Breakeven Yield Risk Ratio	132%	81%	149%	111%	154%	90%	76%	56%
(Yield per acre / BE Yield)								

Note: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

			Organic Green Manure Crops					
Winter Wheat	Buck- wheat	Sunflower Oil	Sweet Clover	Oat / Pea Mix	Red Clover	Forage Peas	Alfalfa	Your Farm
\$39.00	\$35.75	\$16.00	\$15.75	\$49.30	\$25.00	\$37.00	\$13.13	
\$89.77	\$89.77	\$89.77						
\$12.23	\$12.23	\$12.23	\$12.23	\$12.23	\$12.23	\$12.23	\$12.23	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$17.80	\$17.50	\$17.76	\$14.66	\$14.66	\$14.66	\$14.66	\$14.66	
\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$18.77	\$22.74	\$16.93	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$5.12	\$12.80	\$5.12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	
\$3.33	\$3.33	\$3.33	\$3.33	\$3.33	\$3.33	\$3.33	\$3.33	
\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	
		\$10.00						
\$5.47	\$5.67	\$5.10	\$1.97	\$2.81	\$2.20	\$2.50	\$1.90	
\$224.23	\$232.54	\$208.98	\$80.69	\$115.08	\$90.17	\$102.47	\$78.00	
\$64.68	\$64.68	\$64.68	\$64.68	\$64.68	\$64.68	\$64.68	\$64.68	
\$43.29	\$43.29	\$43.29	\$43.29	\$43.29	\$43.29	\$43.29	\$43.29	
\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	
\$6.29	\$2.10	\$5.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$126.17	\$121.97	\$125.60	\$119.88	\$119.88	\$119.88	\$119.88	\$119.88	
\$350.40	\$354.51	\$334.58	\$200.57	\$234.96	\$210.05	\$222.35	\$197.88	
\$64.00	\$64.00	\$64.00	\$64.00	\$64.00	\$64.00	\$64.00	\$64.00	
\$414.40	\$418.51	\$398.58	\$264.57	\$298.96	\$274.05	\$286.35	\$261.88	
\$15.50	\$18.00	\$0.50						
45.0	15.0	900						
bu	bu	lb						
\$697.50	\$270.00	\$450.00						
2	10	6						
32.1%	86.1%	46.4%						
\$473.27	\$37.46	\$241.02						
\$347.10	(\$84.51)	\$115.42						
\$283.10	(\$148.51)	\$51.42						
1	10	5						
68.32%	(35.49%)	12.90%						
12.64%	(0.84%)	5.45%						
\$4.98	\$15.50	\$0.23						
\$7.79	\$23.63	\$0.37						
\$9.21	\$27.90	\$0.44						
14	12.9	418						
22.6	19.7	669.2						
27	23.3	797						
168%	65%	113%						

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AgrilInsurance Analysis

	<u>Brown Flax</u>	<u>Green Peas</u>	<u>HRS Wheat</u>	<u>Oats</u>	<u>Hemp Oil</u>	<u>Soy- beans</u>	<u>Feed Barley</u>
AgrilInsurance							
80% Insured Value	\$190.94	\$231.66	\$178.79	\$151.76	\$345.34	\$292.04	\$176.96
Premium Cost (% of Insured)	11.1%	5.3%	10.2%	9.2%	8.9%	6.1%	3.5%
Costs Not Covered By AgrilInsurance							
Operating Costs	\$44.85	\$2.11	\$54.72	\$67.93	\$0.00	\$0.00	\$22.52
Operating & Fixed Costs	\$166.89	\$124.78	\$179.49	\$198.99	\$62.12	\$93.08	\$148.27
Total Costs	\$230.89	\$188.78	\$243.49	\$262.99	\$126.12	\$157.08	\$212.27
AgrilInsurance Risk Ratio							
Operating Costs	81%	99%	77%	69%	121%	111%	89%
Total Costs	45%	55%	42%	37%	73%	65%	45%
<small>(AgrilInsurance Coverage / Operating Cost)</small>							
Risk Ranking	4	8	2	1	10	9	6
<small>(Lower number indicates increasing risk)</small>							

Risk & Sensitivity Analysis (Stress Test)

Percent Market Price Change	-10.0%
Percent Crop Yield Change	-5%

	<u>Brown Flax</u>	<u>Green Peas</u>	<u>HRS Wheat</u>	<u>Oats</u>	<u>Hemp Oil</u>	<u>Soy- beans</u>	<u>Feed Barley</u>
Market Price (\$ per unit)	\$32.40	\$15.30	\$16.20	\$5.18	\$1.26	\$24.30	\$6.30
Yield (per acre)	15	19	33	76	494	14	40

Stress Test Scenario = Market Price Down 10%, and Crop Yield Down 5%

Gross Revenue / acre	\$486.00	\$290.70	\$534.60	\$393.30	\$622.44	\$340.20	\$252.00
Marginal Returns							
Over Operating Costs	\$250.21	\$56.93	\$301.09	\$173.61	\$336.51	\$77.05	\$52.52
Over Operating & Fixed	\$128.17	(\$65.74)	\$176.32	\$42.55	\$214.98	(\$44.92)	(\$73.23)
Over Total Costs (Net Profit)	\$64.17	(\$129.74)	\$112.32	(\$21.45)	\$150.98	(\$108.92)	(\$137.23)
Profitability Ranking	4	8	3	6	2	7	9
Operating Expense Ratio	48.5%	80.4%	43.7%	55.9%	45.9%	77.4%	79.2%

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AgrilInsurance Analysis

<u>Fall Rye</u>	<u>Winter Wheat</u>	<u>Buck-wheat</u>	<u>Sunflower Oil</u>	<u>Your Farm</u>
\$183.54	\$174.33	\$190.25	\$319.10	_____
5.5%	10.8%	12.0%	5.3%	_____
\$16.31	\$49.90	\$42.29	\$0.00	_____
\$139.96	\$176.07	\$164.26	\$15.48	_____
\$203.96	\$240.07	\$228.26	\$79.48	_____
92%	78%	82%	153%	_____
47%	42%	45%	80%	_____
7	3	5	11	_____

Risks & Sensitivity Analysis (Stress Test)



<u>Fall Rye</u>	<u>Winter Wheat</u>	<u>Buck-wheat</u>	<u>Sunflower Oil</u>	<u>Your Farm</u>
\$7.20	\$13.95	\$16.20	\$0.45	_____
26	43	14	855	_____
\$187.20	\$599.85	\$226.80	\$384.75	_____
(\$12.65)	\$375.62	(\$5.74)	\$175.77	_____
(\$136.30)	\$249.45	(\$127.71)	\$50.17	_____
(\$200.30)	\$185.45	(\$191.71)	(\$13.83)	_____
11	1	10	5	_____
106.8%	37.4%	102.5%	54.3%	_____

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Seed

Crop	Seeding Rate per Acre	Price per Unit	Cost per Acre
Brown Flax	60 lb	\$0.80 /lb	\$48.21
Green Peas	2.50 bu	\$20.00 /bu	\$50.00
HRS Wheat	2.16 bu	\$22.50 /bu	\$48.60
Oats	4.00 bu	\$9.75 /bu	\$39.00
Hemp Oil	25 lb	\$2.50 /lb	\$62.50
Soybeans	84 lb	\$0.90 /lb	\$75.60
Feed Barley	2.5 bu	\$11.00 /bu	\$27.50
Fall Rye	2 bu	\$12.00 /bu	\$24.00
Winter Wheat	2.0 bu	\$19.50 /bu	\$39.00
Buckwheat	65 lb	\$0.55 /lb	\$35.75
Sunflower - Oil	4 lb	\$4.00 /lb	\$16.00
<u>Green Manure Crop</u>			
Sweet Clover	7 lb	\$2.25 /lb	\$15.75
Forage Oat Pea Mix	170 lb	\$0.29 /lb	\$49.30 (50 lb oats, 70 lb peas)
Red Clover	10 lb	\$2.50 /lb	\$25.00
Forage Peas	2 bu	\$18.50 /bu	\$37.00
Alfalfa	3.75 lb	\$3.50 /lb	\$13.13

Soil Fertility

Green manure
 Plowdown rotation 1 year every 4 years

<u>Green Manure Crop</u>	<u>Usage of each crop type</u>
Sweet Clover	50%
Forage Oat Pea Mix	0%
Red Clover	50%
Forage Peas	0%
Alfalfa	0%
	100%
	(Total must = 100%)

Total Annual Green Manure Cost \$89.77 /acre

Compost
 Compost application 1 year every 10 years

Compost cost \$10.50 /ton
 Compost application cost \$10.00 /cubic yard

Compost application rate (tons) 4.50 /acre
 Compost bulk density (tons) 0.60 /cubic yard

Compost cost \$47.25 /acre
Compost application \$75.00 /acre
Total Compost Cost \$122.25 /acre

Total Annual Compost Cost \$12.23 /acre

Operating Costs

Interest Rate on Operating	5.00%	<u>Grain Hauling</u>	
Land Taxes (\$/acre)	\$15.00	Distance to storage	6 miles roundtrip
Labour rate (\$/hour)	\$20.00	Distance to market	0 miles roundtrip
Machinery Operating (\$/acre)	\$10.00	Grain truck fuel use	5 Miles per Imp. Gallon
Other Costs (\$/acre)	\$7.75	Grain truck size	475 bushels
Fuel Cost (\$/litre)	\$0.85		

Operating Cost (\$/Acre)

Crop	Labour (hrs/acre)	Fuel	Crop		Drying Costs	Storage \$/acre	Rental and Custom Costs				Total	
			Insurance	Hail Insurance			Seeding	Application	Swathing	Harvest		General
Brown Flax	3.2	\$17.51	\$21.12	\$5.12	-	\$2.17	-	-	-	-	-	\$0.00
Green Peas	3.2	\$17.55	\$12.20	\$10.24	-	\$2.80	-	-	-	-	-	\$0.00
HRS Wheat	3.2	\$17.70	\$18.31	\$5.12	-	\$4.89	-	-	-	-	-	\$0.00
Oats	3.2	\$18.14	\$13.99	\$5.12	-	\$11.18	-	-	-	-	-	\$0.00
Hemp Oil	3.2	\$17.47	\$30.67	\$10.24	\$20.00	\$1.65	-	-	-	-	-	\$0.00
Soybeans	3.2	\$17.50	\$17.87	\$7.68	-	\$2.10	-	-	-	-	-	\$0.00
Feed Barley	3.2	\$17.77	\$6.15	\$5.12	-	\$5.87	-	-	-	-	-	\$0.00
Fall Rye	3.2	\$17.62	\$10.16	\$5.12	-	\$3.77	-	-	-	-	-	\$0.00
Winter Wheat	3.2	\$17.80	\$18.77	\$5.12	-	\$6.29	-	-	-	-	-	\$0.00
Buckwheat	3.2	\$17.50	\$22.74	\$12.80	-	\$2.10	-	-	-	-	-	\$0.00
Sunflower - Oil	3.2	\$17.76	\$16.93	\$5.12	\$10.00	\$5.72	-	-	-	-	-	\$0.00
Green Manure Crop												
Sweet Clover	3.2	\$14.66	\$0.00	\$0.00	-	-	-	-	-	-	-	\$0.00
Forage Oat Pea I	3.2	\$14.66	\$0.00	\$0.00	-	-	-	-	-	-	-	\$0.00
Red Clover	3.2	\$14.66	\$0.00	\$0.00	-	-	-	-	-	-	-	\$0.00
Forage Peas	3.2	\$14.66	\$0.00	\$0.00	-	-	-	-	-	-	-	\$0.00
Alfalfa	3.2	\$14.66	\$0.00	\$0.00	-	-	-	-	-	-	-	\$0.00

* Storage costs are listed under Fixed Costs on the Summary Page.

Field Fuel Usage

Crop	Total L/acre	Number of Field Operations & Litres Fuel Per Acre Per Operation								Trucks L/acre	
		cultivator or tandem disk	high speed disk	harrow or land roller	air drill	row planter	misc.	swather	combine	3/4 ton pickup	grain hauling
		2.25	3.5	0.75	2.5	1.3	0	1.13	5.54	3	
Brown Flax	20.60	3		2	1			1	1	3	0.18
Green Peas	20.65	3		2	1			1	1	3	0.23
HRS Wheat	20.82	3		2	1			1	1	3	0.40
Oats	21.34	3		2	1			1	1	3	0.92
Hemp Oil	20.56	3		2	1			1	1	3	0.14
Soybeans	20.59	3		2	1			1	1	3	0.17
Feed Barley	20.90	3		2	1			1	1	3	0.48
Fall Rye	20.73	3		2	1			1	1	3	0.31
Winter Wheat	20.94	3		2	1			1	1	3	0.52
Buckwheat	20.59	3		2	1			1	1	3	0.17
Sunflower - Oil	20.89	3		2	1			1	1	3	0.47
Green Manure Crop											
Sweet Clover	17.25	3	1	2	1					3	
Forage Oat Pea Mix	17.25	3	1	2	1					3	
Red Clover	17.25	3	1	2	1					3	
Forage Peas	17.25	3	1	2	1					3	
Alfalfa	17.25	3	1	2	1					3	

Guidelines: Organic Crop Production Costs

Fixed Costs

Land value (\$/acre)	\$2,800	Land cost (\$/acre)	\$64.68
Total Crop acres	600	Machinery Investment (\$/acre)	\$432.92
Depreciation Rate	10.0%		
Investment Rate	2.75%		
<u>Grain Storage</u>		<u>Machinery Depreciation cost (\$/acre)</u>	
Usage %	<u>Cost</u>	Machinery Investment cost (\$/acre)	\$11.91
Non-aeration bins	25% \$1.95 /bu	Machinery Lease cost (\$/acre)	\$0.00
Aeration bins	75% \$2.45 /bu	Total (\$/acre)	\$55.20

Owned Equipment Inventory and Current Values

	Market Value	Grain Usage %	Grain Allocation		Market Value	Grain Usage %	Grain Allocation
Power & Misc Equipment				Harvest Equipment			
4WD Tractor	\$75,000	100%	\$75,000	Combine	\$50,000	100%	\$50,000
2WD Tractor	\$20,000	75%	\$15,000	Swather	\$15,000	100%	\$15,000
ATV Quad	\$3,000	75%	\$2,250	PTO Auger	\$4,500	100%	\$4,500
	\$0	0%	\$0	Auger	\$2,000	100%	\$2,000
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total			\$92,250	Total			\$71,500

	Market Value	Grain Usage %	Grain Allocation		Market Value	Grain Usage %	Grain Allocation
Seeding, Tillage, Spraying				Trucks & Trailers			
Cultivator	\$12,500	100%	\$12,500	Tandem grain truck	\$25,000	100%	\$25,000
Harrow	\$10,000	100%	\$10,000	5th wheel flatdeck	\$2,000	100%	\$2,000
Air tank	\$12,500	100%	\$12,500		\$0	0%	\$0
Air drill	\$25,000	100%	\$25,000		\$0	0%	\$0
Rock picker	\$1,500	100%	\$1,500		\$0	0%	\$0
tandem disk	\$7,500	100%	\$7,500		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total	\$69,000		\$69,000	Total			\$27,000

Owned Equipment TOTAL	\$259,750	\$432.92 per acre
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Leased Equipment Inventory

	Annual Lease	Grain Usage %	Grain Allocation		Annual Lease	Grain Usage %	Grain Allocation
Power & Misc Equipment				Harvest Equipment			
enter equipment here	\$0	0%	\$0	enter equipment here	\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total			\$0	Total			\$0

	Annual Lease	Grain Usage %	Grain Allocation		Annual Lease	Grain Usage %	Grain Allocation
Seeding, Tillage, Spraying				Trucks & Trailers			
enter equipment here	\$0	0%	\$0	enter equipment here	\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total	\$0		\$0	Total			\$0

Leased Equipment TOTAL	\$0	\$0.00 per acre
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* Leased equipment costs are listed under Operating Costs on the Summary Page.

Other Assumptions

Fuel Costs: Includes fuel used for field work, trucking in inputs and trucking out production.

Machinery Operating Costs: Includes costs for maintenance, repairs, licenses and insurance.

Crop Insurance: (2017 rates) Risk Area #2 "E" soil zone at 80% coverage and additional hail insurance at \$160/acre coverage for all crops. Flax, HRS Wheat, Oats, and Winter Wheat are based on organic insured values.

Other Costs: Includes overhead expenses - hydro, telephone, accounting, buildings, supplies and insurance, etc.

Land Taxes: The average cost based on land tax assessment and mill rates of a sample of municipalities growing crops.

Drying Costs: Budget allocates costs only for sunflowers and hemp. However, drying costs may be incurred in some years for the other crops.

Interest On Operating: Interest charges on operating costs are calculated at 5% for six months.

Land Investment Cost: Land value are based on approximate average land values. Budget assumed 2.75% return on land investment

Depreciation: Assumed 10% on machinery, no salvage value.

Investment Cost: Assumed 2.75% opportunity cost on machinery.

Estimated Farmgate Values:

Crop prices are based on deferred delivery contract prices for fall 2018.

Estimated yields are based on 60% of MASC 10 year averages for Manitoba for all crops except for hemp and buckwheat at 90%

Depreciation Cost = $\frac{\text{Original Cost} - \text{Salvage Value}}{\text{Useful Life}}$

Investment Cost = $\frac{\text{Original Cost} + \text{Salvage Value}}{2} \times \text{Investment Rate}$

Storage Cost:

Storage costs for each crop are based on estimated yields entered on the Summary page.

Assumed a 10% depreciation cost and 2.75% investment cost.

Farm storage requirements were assumed to cost \$1.95/bushel for 25% of the storage and \$2.45/bushel for 75% aerated storage.

Example - Wheat

Non-Aeration Bins (25%)

Depreciation:	$\frac{\$68.25 - \$6.825}{20 \text{ years}}$	=	\$3.07	
Investment:	$\frac{\$68.25 + \$6.825}{2} \times 2.75\%$		\$1.03	
	Sub-Total		\$4.10	x 25% = \$1.03

Aeration Bins (75%)

Depreciation:	$\frac{\$85.75 - \$8.575}{20 \text{ years}}$	=	\$3.86	
Investment:	$\frac{\$85.75 + \$8.575}{2} \times 2.75\%$		\$1.30	
	Sub-Total		\$5.16	x 75% = \$3.87
			Total	\$4.89

Profitability, Breakeven & Risk Analysis Formulas:

Gross Revenue = Price per unit x Yield per acre (eg. wheat: \$18.00/bu x 35bu/ac = \$630.00/ac)

Net Profit = Gross Revenue - Total Cost (eg. wheat: \$630.00 gross revenue - \$422.28 total cost = \$207.72 per acre)

Operating Expense Ratio = (Operating Cost / Gross Revenue) x 100 (eg. wheat: \$233.51 operating expense / \$630.00 total cost = 37.1%)

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost (eg. wheat: (\$630.00 gross revenue - \$422.28 total cost) / \$422.28 total cost = 49.2%)

Estimated Return on Asset (ROA) = (Margin Over Operating - Labour - Machinery Depreciation) / (Land Investment Cost + Machinery Investment Cost)

(eg. wheat: (\$396.49 margin - \$64.00 labour - \$43.29 machinery dep.) / (\$2800 land cost + \$432.92 machinery inv.) = 10.26%)

Breakeven Price = Cost / Target Yield (eg. wheat cost \$422.28 / 35 bu = \$12.07 per bu)

Breakeven Yield = Cost / Price per Unit (eg. wheat cost \$422.28 / \$18.00 bu = 23.5 bu)

Breakeven Yield Risk Ratio = (Yield per Acre / Breakeven Yield) x 100 (eg. wheat yield 35 bu/ac / 23.5 bu BE = 149 %)

Agrilnsurance Risk Ratio = (Agrilnsurance Coverage / Operating Cost) x 100 (eg. wheat coverage \$178.79/ac / \$233.51 operating expense = 77 %)

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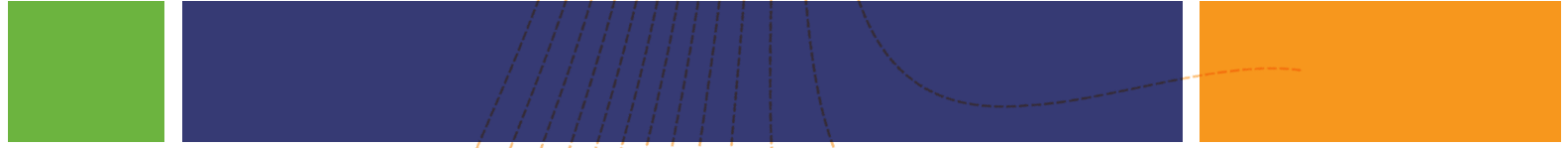
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- Contact your local Manitoba Agriculture Office.
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